SOME NEW BOOKS.

The Rationale of Illusions.

The latest number of Appleton's International Scientific Series bears the title of *Illusions*, and is an interesting contribution by Mr. JAMES SULLY to the study of mental pathology. The author's field of inquiry covers all the phenomena of illusion observed in sense-perception, in the introspection of the mind's own feelings, in the reading of others' feelings, in memory, and in belief. The author's conclusions are often illustrated by concrete example or anecdote, and his general treatment of the subject, while essentially scientific, is sufficiently clear and animated to attract the general reader.

Mr. Sully's definition of illusions is comprehensive and satisfactory. He would describe all knowledge as a correspondence of representation with fact, or experience, or as a stable condition of the representation which cannot be disturbed by new experiences. Illusion, as distinguished from correct knowledge, he would define as deviation of representation from fact. This is due partly to limitations and defects in the intellectual mechanism itself, such as the imperfections of the activities of attention, discrimination, and comparison, or the delusive influences exerted by ill-grounded associations. Thus, a passive error of perception or of expectation may, in general, be ascribed to a defective grouping of elements which answers, perhaps, to the run of the individual's actual experience, but not to a large and complete common experience. So, too, an illusory general belief is a welding together of concepts in disagreement with the permanent connections of experience. Even a passive illusion of memory, in so far as it involves a rearrangement of successive representations, shows the same kind of defect. On the other hand, what Mr. Sully calls "active illusions," under which term he classifies the excited perceptions and the hallucinations of sense, or the fanciful projections of memory or of expectation, are attributable not to defects in attention and discrimination, combined with insufficiently grounded association, but to the independent play of constructive imagination and the caprices of feeling. Active illusion, in other words, arises not through the imperfections of the intellectual mechanism, but through a palpable interference with this mechanism. It is a regrouping of elements, which simulates the form of a suggestion by experience, but is in reality the outcome of the individual mind's extra-intellectual impulses.

Having noted the definitions which constitute the ultimate results of the author's inquiries, let us glance at some of the facts and considerations adduced to justify them. Among the passive illusions of perception he distinguishes two kinds, those, namely, determined by the organism, and those determined by the environment. It is known that the sensation does not always answer to the external stimulus in its degree or intensity. For example, when all objects are but feebly illuminated, we tend to magnify the differences of light among them—that is, to see them much more removed from one another in point of brightness than when they are more strongly illumined. Helmholtz relates that owing to this tendency he has occasionally caught himself on a dark night entertaining the illusion that the comparatively bright objects visible in twilight, such as a white stone, were self-luminous. Again, two impressions are frequently confused when the sensory fibres involved are very near one another. To take the points of two legs of a pair of compasses for one point is clearly an illusion of perception. Many persons have also noticed that very cold and smooth surfaces, like those of metal, often appear to be wet. Helmholtz explains the phenomenon by saying that the feeling which we call by the name of wetness is a compound sensation, consisting of one of temperature and one of touch proper. Hence, when the particular conjunction of sensations arises, apart from the external fact of wetness, we erroneously infer the presence of a cold liquid. The perception of lustre as a single quality seems to illustrate a like error. There is good reason to suppose that this impression arises through a difference of brightness in the two retinal images, and so, when this inequality of retinal effect is imitated, as it may easily be by combining a black and a white surface in a stereoscope, we imagine that we are looking at one lustrous surface. The most interesting case of illusion connected with the fusion of simultaneous sensations is that of single vision, or the deeply organized habit of combining the sensations of what are called the corresponding points of the two retinas. In the case of looking at solid objects it is demonstrable that the forces acting on the two retinas are not perfectly similar. Nevertheless, the coalescence of the sensations answers to the fact that these external agencies usually arise in one and the same object, and this unity of the object is, of course, the all-important thing to be sure of. We scarcely need remind the reader that it is a law of sensory stimulation for an impression to persist during an appreciable time after the cessation of the action of the stimulus. Thus, after taking the bandage from a finger, the tingling and other sensations due to the pressure may continue for a certain period, in which case they easily give rise to the illusion that the finger is still bound. There is an opposite but equally familiar limit to sensibility. It is a law of nervous stimulation that a continued activity of any structure results in less and less psychic effect. Thus, a constant noise, as of a mill, ceases finally to produce any conscious sensation, a fact which may readily become the commencement of an illusion.

It is a matter of common experience that the localization of a sense impression, both within and without the organism, may be altogether illusory. Thus the stimulation of the nerve running to the hand and fingers, by a sharp blow on the elbow over which it passes, gives rise to a sense of pain at the extremities of the nerve. It is well known that a man who has lost a leg refers all sensations arising from a stimulation of the truncated fibres to his lost foot, and sometimes has to convince himself of the non-existence of his lost member by sight or touch. "If," said one of Dr. Weir Mitchell's patients, "I should say I am more sure of the leg which ain't than the one which air, I guess I should be about correct." Again, the feeling of something creeping over the skin is an hallucination, in the sense that it implies the idea of an object external to the skin. Of a similar kind are the hallucinations observed in sufferers from alcoholism, where ocular impressions due to retinal disturbance are projected into the external field of vision. What curious blunders may result from the deeply rooted habit of making subjective sensation the measure of objective quality is, perhaps, best illustrated by the well-known experiment of first plunging one hand in cold water, the other in hot, and then dipping them both in tepid water, for here we are strongly disposed to accept the palpable contradiction that the same water is at once warm and cool.

In the varieties of perceptive illusions just considered, the circumstance that gives the peculiarity to the case thus wrongly interpreted has been referred to the organism. In another chapter the author considers those attributable to the environment, and among these may be cited the familiar example of a man crunching a hard biscuit, who has an uncomfortable feeling that the noise, as of all the structures of his head being violently smashed, is heard with equal intensity by other ears. Again, an illusive perception of the unity of an object is illustrated by the experiment of crossing two fingers, say the third and fourth, and placing a marble between them. Under ordinary circumstances the outer surfaces of the two fingers can only be acted on simultaneously by two objects having convex surfaces. Consequently we cannot help feeling the presence of two objects in this exceptional instance. Other familiar examples of illusions due to circumstances altogether exterior to the sense organ are furnished by the phenomena of the refraction of light and the reflection of light and sound. Thus a stick half immersed in water always looks broken, however well we may know that the appearance is due to the bending of the rays of light upon entering a denser medium. Similarly, an echo always sounds as if it came from some object in the direction in which the air waves finally travel to the ear, though we know that these undulations have taken a circuitous course. The almost irresistible tendency to mistake the direction of the visible or audible object in such cases has from remote ages been made use of as a means of popular delusion. The throwing of images formed by concave mirrors upon smoke or against fire, so as to make them more distinct, seems to have been a favorite device in the ancient art of necromancy.

The habitual interpretation of the flat surface in pictorial art, so as to give the effect of objects in relief or having depth, is at once understood when we recall the myriads of instances in our daily experience where the effect of such flat representations answers to solid receding forms. In the case of all distant objects we have to interpret solidity and relations of nearer and further by such signs as linear perspective and cast shadow. Indeed, it is only in the artificial life of indoors, on our picture-covered walls, that we ever experience such effects without discovering corresponding realities. Hence a deeply organized habit of taking these impressions, as answering to the solid, and not to the flat, and hence the means of perfect imitation and delusion possessed by pictorial art. In connection with this topic Mr. Sully mentions the well-known fact that the eye in a portrait seems to follow the spectator, or that a pictured gun, with its muzzle pointing straight outward, appears to turn as the spectator moves. According to Sir D. Brewster, these examples of pictorial illusion depend upon the fact that a painting, being a flat projection only, and not a solid, continues to present the front view of an object which it represents wherever the spectator happens to stand. Were the eye of the portrait a real eye, a side movement of the spectator would obviously cause him to see less of the pupil, and more of the side of the eyeball. Aware of this, and instinctively regarding the eye of the picture as a real eye, having relief, we infer from our continuing to see the full pupil that it must follow us as we move.

The errors committed in recognizing objects are nowhere so strikingly exhibited as in the most familiar effects of pictorial art. Thus, a picture of Meissonier may give the eye a representation of a scene in which the human figures and horses have a distinctness that belongs to near objects, but an apparent magnitude that belongs to distant objects. So again it is found that the degree of luminosity or brightness of a pictorial representation differs in general enormously from that of the actual things portrayed. Thus, according to the calculations of Helmholtz, a picture representing a Bedouin's white raiment in blinding sunshine will, when seen in a fairly lighted gallery, have a degree of luminosity reaching only to about one-thirtieth of that of the actual object. On the other hand, a painting representing marble ruins gleaming in the moonlight will, under the same conditions of gallery illumination, have a luminosity amounting to as much as from ten to twenty thousand times that of the object. Yet the spectator does not notice these stupendous discrepancies. The representation, in spite of its vast difference, at once carries the mind on to the actuality, and the spectator may even appear to himself, in moments of complete absorption, to be looking at the real scene. Sensation is overpowered by suggestion.

Among the active illusions of the perceptive faculty, Mr. Sully dwells particularly on the effects of vivid expectation. Illustrations of this phenomenon occur daily. If we happen, for instance, to have heard that a particular person has been a soldier, or clergyman, we tend to see the marks of the class in this person, though we may discover in the end that the process of recognition is altogether illusory. Again, if we expect a friend to arrive by a particular train, and a passenger bearing a superficial resemblance to him steps out of the cars, we are very likely to fall into the error of false identification. When the degree of expectation is unusually great, it may suffice to produce something like the counterfeit of a real sensation. Thus, if we are watching a train off, and know from all the signs that it is just about to start, we may easily delude ourselves into the conviction that it has begun to move. A similar effect is seen in such common experiences as that the sight of food makes the mouth of a hungry man water, the appearance of a surgical instrument produces a nascent sensation of pain, or a threatening movement, giving a vivid anticipation of tickling, begets a feeling which closely approximates to the result of actual titillation. A striking instance of imagined sensations is given by Dr. Carpenter. An officer who superintended the exhuming of a coffin, rendered necessary through a suspicion of crime, declared that he already experienced the odor of decomposition, though it was afterward found that the coffin was empty.

It is plain that, in these cases, illusion approaches to hallucination, but the immediately present environment still coöperates to an important extent with the illusory expectation. On the other hand, the share of the sensory perception is very slight in the grosser illusions of the insane. Thus when a sufferer from cerebral disorder takes any small objects, as pebbles, for gold and silver, under the influence of the notion that he is a millionaire, it is obvious that external suggestion has very little to do with the self-deception. In normal life, perfect hallucinations, that is to say, illusions in which external suggestions have had no share, are comparatively infrequent. They are occasionally met with in the lives of eminent men; but here it is probable that intense intellectual concentration had occasioned incipient nervous disorder. Malebranche is said to have heard the voice of God calling him. Descartes says that, after a long confinement, he was followed by an invisible person, summoning him to pursue his search for truth. Dr. Johnson narrates that he once heard his absent mother calling him. Byron tells us that he was sometimes visited by spectres. Goethe records that he once saw an exact counterpart of himself coming toward him. Sir Walter Scott is alleged to have seen a phantom of the dead Byron. When not brought on by exhaustion or artificial means, the hallucinations of the sane have their origin in a preternatural power of the imagination. It is well known that this faculty can be greatly improved by attention and cultivation. Goethe used to occupy himself in watching for ocular spectra, and could at will transform the subjective sensations into definite forms, such as flowers. Stories are told of portrait painters who have been able to summon visual images of their sitters with a vividness equal to that of reality, and serving all the purposes of their art. Mr. Galton's researches into the power of "visualizing" seem to prove that many people can, at will, sport on the confines of the phantom world of hallucination. As to the hallucinations of the insane, it is a matter of common observation that they seldom depend on sense disturbances alone. Though these are sometimes the starting point, it is the whole mental complexion of the moment which gives the direction to the imagination. The common experience of seeing rats and mice running about during a fit of *delirium tremens* well illustrates the coöperation of visual impressions not usually attended to, and possibly magnified by the mere state of sensibility at the time (in this case the actual visual impressions are flying spots, *muscæ volitantes*) with emotional conditions.

Dreams are commonly classified with hallucinations, because they are for the most part the mere semblance of percepts in the absence of external impressions. But recent research goes to show that in many dreams something answering to the sensory impulse in waking perception is the starting point. The author accordingly divides dreams into illusions proper and hallucinations. Few people are aware to what an extent our dreams may be influenced by stimuli acting on the exterior sense organs. During sleep, for instance, the eyes are closed; yet it is found that even under these circumstances any very bright light suddenly introduced is capable of stimulating the optic fibres and of affecting consciousness. Krauss tells a story of his having once caught himself on waking in the act of stretching out his arms toward what his dream fancy had pictured as the image of his mistress. When fully awake this image resolved itself into the full moon. Radestock deems it not improbable that the rays of the sun or moon are answerable for many of the dreams of celestial glory which persons of a highly religious temperament are said to experience. External sounds, too, although quite insufficient to rouse a sleeper, may easily incorporate themselves into his dreams. M. Alfred Maury tells us that when a pair of tweezers was made to vibrate near his ear, he dreamed of bells, the tocsin, and the events of June, 1848. Scherner gives an account of a youth who was permitted to whisper his name into the ear of his obdurate mistress, the consequence of which was that the lady contracted a habit of dreaming about him, which led to a felicitous change of feeling on her part. The contact of objects with the tastual organ is one of the best recognized causes of dreams. M. Maury found that when his lips were tickled his dream fancy interpreted the impression as of a pitch plaster being torn off his face. An unusual pressure on any part of the body, as, for example, from contact with a fellow sleeper, is known to give rise to a well-marked variety of dream. Our own limbs may even appear as foreign bodies to our dream imagination when, through pressure, they become partly paralyzed. On the other hand, the senses of smell and taste seem to play an important part in the production of dream illusions. Radestock says that the odor of flowers in a room leads to visual images of hothouses, perfumery shops, &c., and, as a rule, these lower sensations do not make known their quality to the sleeper's mind. They become transformed into visual, instead of olfactory or gustatory, perceptions.

Johannes Müller, Alfred Maury, and others have laid great stress on the part taken by subjective stimuli, and especially ocular spectra, in the production of dreams. The light patches and mists of light manifested when the eyes are closed, and due to changes of blood pressure in the retina, are quite certainly the starting point of these picturesque dreams, in which figure a number of bright objects, such as beautiful birds, butterflies, flowers, or angels. That the visual images of our sleep do often involve subjective sensations of the organ of sight seems to be proved by the singular fact that they sometimes persist after waking. Spinoza and Jean Paul Richter both experienced this survival of dream images. Equally pertinent is the fact that the effects of retinal fatigue are produceable by dream images. The physiologist Gruithuisen had a dream in which the principal feature was a violet flame, and which left behind it, after waking for an appreciable duration, a complementary image of a yellow spot. Subjective auditory sensations seem to be much less frequent causes of dream illusions, yet the rushing, roaring sound caused by the circulation of the blood in the ear is probably a not uncommon source of dreams. With respect to subjective sensations of smell and taste there is little to be said. But variations in the state of tension of the skin, brought about by alteration of position, changes in the character of the circulation, the irradiation of heat to the skin, or the loss of caloric to the same, give rise to a number of familiar sensations which are distinctly traceable in dreams. For example, the exposure of a part of the body through a loss of the bedclothes is a frequent excitant of distressing dreams. A cold foot suggests that the sleeper is walking over snow or ice. On the other hand, if the cold foot happens to touch a warm part of his own or another's body, the dream fancy constructs images of walking on burning lava or a fiery furnace. These sensations of the skin naturally conduct our author to the organic sensations as a whole, that is to say, the feelings which arise in connection with the processes of digestion, respiration, and circulation. During our waking life these organic feelings coalesce, for the most part, forming as the "vital sense" an obscure background for our clear discriminative consciousness. But when we are asleep, and the avenues of external perception are closed, they assume greater prominence and distinctness. So important a part, indeed, do these organic feelings take in the dream drama that some writers, including Schopenhauer, have been disposed to regard them as the main, if not the exclusive, cause of dreams.

The degree of natural coherence and rational order which some of our dreams possess is commonly accounted for by the purely passive and involuntary processes of association. Mr. Sully, however, considers it an erroneous supposition that when we are dreaming there is a complete suspension of the voluntary powers, and, consequently, an absence of all direction of the intellectual processes. This supposition, which has been maintained by Dugald Stewart and many others, seems to be based on the fact that we frequently find ourselves in dreams striving in vain to move the whole body, or a limb. But this only shows, as Maury and Volkelt have pointed out, that our volitions are frustrated through the inertia of our bodily organs, not that these volitions do not take place. An exercise of the will is unmistakably attested in the well-known instances of extraordinary intellectual achievements in dreams, such as Condillac's composition of a part of his "Cours d'Etude." No one would maintain that a result of this kind was possible in the total absence of intellectual action carefully directed by the will.

The general inference from Mr. Sully's scrutiny of dream life is that the structure of our dreams, equally with the fact of their completely illusory character, demonstrates that during sleep, just as in the moments of illusion in waking life, there is, on the whole, a marked deterioration of our intellectual energies. The highest intellectual activities answering to the least stable nervous connections are, as a rule, impeded, and what of intellect remains corresponds to the most deeply organized connections in the nerve substance of the brain. In this way our dream life touches that childish condition of our intelligence which marks the decadence of old age and the encroachments of mental disease. The parallelism between dreams and insanity has been pointed out by most writers on the subject. Kant observed that the madman is the dreamer awake, and more recently Wundt has remarked that when asleep we can experience nearly all the phenomena which meet us in lunatic asylums. The grotesqueness of the combinations, and the lack of all judgment as to consistency, fitness, and probability, are common characteristics of the short night dream of the healthy and the long day dream of the insane.

Two of the most interesting chapters in this volume are those which deal with the illusions of memory and of belief. The faculty of reminiscence, indispensable though it is, can lay no claim to the absolute infallibility which is sometimes said to belong to it. Our individual recollection left to itself is liable to a number of illusions even with regard to not very distant events, and in the case of remote ones it may be said to err habitually in a greater or less degree. To speak plainly, we can never be certain on the ground of our personal recollection alone that a distant event happened exactly in the way or at the time that we suppose. Nor does there seem to be any simple way of determining by mere reflection on the contents of our memory what kinds of recollection are likely to be illusory. The illusions of memory may be simply transformations of actual events or the reproductions of complete imaginative creations. To the former class belong errors of mnemonic perspective, where we have a mistaken notion as to the remoteness of an event; errors of localization, where we connect a past event with a wrong environment; and distortions of memory which, according to the analogy of visual errors, may be ascribed to a kind of atmospheric illusion. There would seem, at first sight, no room for error when the mind is able to travel back over a long and uninterrupted series of experiences to a definitely apprehended point. It is a fact, however, that such retrospective measurement is quite untrustworthy. Vierordt has proved experimentally, by making a person try to produce the varying time intervals between the strokes of a pendulum of a metronome, that when the interval is a very small one we uniformly tend to exaggerate it in retrospection; when a large one, to regard it as less than it actually was. Moreover, just as the apparent distance of a visible object depends, other things being equal, on the distinctness of the retinal impression, so the apparent temporal remoteness of a past event depends in part on the degree of intensity and clearness of the mnemonic image. A series of exciting experiences intervening between the present and a past event tends not only directly to add to our sense of distance by constituting an apparently long interval, but indirectly to add to it by giving an unusual degree of faintness to the recalled image.

There is no doubt that the transformation undergone by the past in memory does often closely correspond with the metamorphosis of a visible object affected by intervening media. Our minds are such refracting media, and the past reappears to us, not as it actually was when it was close to us, but in numerous ways altered and disguised by the intervening spaces of our conscious experience. Not only is what we call recollection a process of softening reality, but, as a rule, our memories restore to us but fragments of our past life. When revisiting a place that we had not seen for many years, we are apt to find that our recollection of it consisted only of some insignificant details, which arranged themselves in our minds into something oddly unlike the natural scene. Our idea of any stage of our past history, as of our early childhood, is built up out of a few fragmentary intellectual relics, which cannot be certainly known to answer to the most important and predominant experiences of the time. When, for example, we try to decide whether our school days were our happiest days, as is so often alleged, it is obvious that we are liable to fall into illusion through the inadequacy of memory to preserve characteristic or typical features, and none but those. Besides the impossibility of getting at the average and prevailing mental tone of a distant section of life, there is a special difficulty in determining the degree of happiness of the past, arising from the fact that our memory for pleasures and for pains may not be equally good. Most people, perhaps, can recall the enjoyments of the past much more vividly than the sufferings. On the other hand, there seem to be some who find the retention of the latter the easier of the two. This latter fact should not be forgotten in reading the narrative of early hardships which the fragment of an autobiography prepared by Carlyle has given us.

Not only does our recollection of the past become inexact by the mere decay and disappearance of essential features, but it becomes positively incorrect through the gradual incorporation of elements that do not properly belong to it. When the imagination supplies a mistaken interpretation at the very time of the experience, and the mind reads this into the perceived object, the error is one of perception. But when the addition is made afterward, upon reflecting on the perception, the error is one of memory. The "fallacies of testimony," which depend on an adulteration of pure observation with inference and conjecture, as, for example, the inaccurate and wild statements of people respecting their experiences at spiritualist séances, are probably much oftener illusions of memory than of perception. Of course, in trying to reconstruct the remote past, we are continually in danger of importing our present selves into the picture. The kind of mnemonic illusion which thus depends on the spontaneous activity of present imagination is strikingly illustrated in the curious cases of mistaken identity with which the proceedings of the law courts supply us. When a witness in good faith, but erroneously, affirms that a man is the same as an old acquaintance of his, we may feel sure that there is some striking point of similarity between the two persons; but what helps, in this case, to produce the illusion is the preconception that the present man is the witness's old friend.

Among the pure hallucinations of memory may be cited the instances in which dream experience leads us into illusory recollection. It is sometimes very hard to shake off the impression left by a vivid dream, as, for example, that a dead friend has returned to life. During the day that follows the dream we have at intermittent moments something like an assurance that we have seen our lost friend, and for a considerable period it may tend to revive within us with a strange pertinacity. Mr. Sully deems it highly probable that our dreams are to a large extent answerable for the sense of familiarity that we sometimes experience in visiting a new locality or seeing a new face. If, as some of the best authorities aver, we are, when asleep, always dreaming, more or less distinctly, and if, as we know, dreaming is a continual process of transformation of our waking impressions in new combinations, it is not surprising that our dreams should sometimes take the form of forecasts of our waking life, and that consequently objects and scenes never before witnessed should occasionally wear a familiar look. That some instances of this puzzling sense of familiarity can be explained in this way has been proved by Paul Radestock, who was in the habit of keeping an exact record of his dreams. Mr. Sully suggests another possible source for certain perplexing spectra of memory. May it not happen, he asks, that by the law of hereditary transmission, which is now being applied to mental as well as bodily phenomena, ancestral experiences will now and then reflect themselves in our mental life, and so give rise to apparently personal recollections? When the infant first steadies his eyes on a human face, it may, for aught we know, experience a feeling akin to that described above, when, through a survival of dream fancy, we take some new scene to be already familiar. In our present state of knowledge, however, any reasoning on this supposition would probably appear too fanciful. But if in the course of future investigation it should be found that a child descended from a line of seafaring ancestors, but which had never itself seen or heard of the dark-gleaming sea, manifested a feeling of recognition when first beholding it, we might be pretty sure that such a thing as recollection of prenatal events does take place.

If it be true that so much uncertainty and self-deception enters into the processes of memory, how then, it may be asked, can we ever be sure that we are faithfully recalling the actual events of the past? Given a fairly good, that is, a cultivated memory, it may be said that, in the case of very recent events, a man may feel certain that when the conditions of careful attention at the time to what really happened were present a distinct recollection is substantially correct. Mr. Sully concedes, too, that with respect to all repeated experiences our memories afford practically safe guides. On the other hand, when an event is not repeated in our experience, but forms a unique link in our personal history, the chances of error increase with the distance of the event, and here the best of us will do well to have resort to a process of verification. When there is no unerring objective record to be found, we may recur to the less satisfactory method of comparing our recollections with those of others. But even thus we cannot be sure of eliminating all error, since there may be a cause of illusion acting on all our minds alike, as, for example, the extraordinary nature of the occurrence, which would pretty certainly lead to a common exaggeration of its magnitude, if not to a mistake as to its character, and since, moreover, this process of comparing recollections affords an opportunity for reading back a present preconception into the past.

Under the head of illusions of belief, Mr. Sully discusses ill-grounded expectations and mistakes in self-appreciation, as well as erroneous beliefs in past facts not guaranteed by memory. It has long been recognized, by writers on psychology, that to distinctly imagine an event or object is to feel for the moment a degree of belief in the corresponding reality. It is, of course, our ruling aspirations which most commonly and permanently assume the form of an illusory prevision of a personal experience. In minds undisciplined by scientific training such illusions tend to harden into what may be termed intuitive convictions. Again, a single illusion of perception, or of memory, may suffice to give rise to a wholly illusory belief in a class of objects, for example, ghosts. The superstitious beliefs of mankind demonstrate how multitudinous and complex are the sources of misconception. Even in the case of our every-day convictions concerning real objects, these sources contribute a considerable quota of error. Thus our prevailing views respecting any section of mankind, say our fellow countrymen, or mankind at large, correspond at best to a very loose process of reasoning. The accidents of our personal experience and opportunities of observation, the traditions which colored our first ideas, the influence of our dominant feelings in selecting for attention certain aspects of the complex object, and in idealizing this object—these sources of passive and active illusion must, to say the least, have had as much to do with our present solidified and seemingly intuitive knowledge as anything that can be called the exercise of individual judgment and reasoning power. Mr. Sully shows us, finally, how illusion may enter into that still wider collection of beliefs which make up our ordinary views of life and the world as a whole. In these views are mirrored in the plainest manner the fortuitous occurrences of our individual experience, and the peculiar errors to which our intellectual and emotional conformation disposes us. The world is for us what we feel it to be; and we feel it to be, in turn, the cause of our particular emotional experience. Just as our environment helps to determine our idea of self and personal continuity, so conversely our inner experience, our remembered or imagined joys and sorrows, throw a reflection on the outer world, giving it its degree of worth. Hence the contradictory, and consequently to some extent illusory, notions of the optimist and the pessimist, whose so-called intuitions are connected with deeply rooted habits of feeling, and are antecedent to all reasoned philosophic systems.

Madame De Rémusat's Letters.

The letters of Mme. de Rémusat, written to her husband and son during the period from 1804 to 1813, have been translated into English by Mrs. CASHEL HOEY and Mr. JOHN LILLIE, and are now published by the Harpers. They will be found curious and interesting for the light they cast on the writer's personality, and on the imperial court, but we cannot reasonably expect them to add anything to the piquant disclosures relating to Napoleon I. and his immediate family, which were contained in the same author's memoirs. Mme. de Rémusat, like every one else connected with the court, was perfectly aware that her epistles would pass under the eye of Fouché or Savary before they would be permitted to reach the person addressed. She governed her pen accordingly, and it is only here and there that her secret opinion of the Bonapartes is revealed by an artful phrase, or a suggestive reticence.

The earnest and even passionate affection which Mme. de Rémusat testifies for her husband in these letters will appear very striking to those familiar with the manners of the time, and who contrast the fidelity of her attachment with the undisguised indifference which frequently marked the conjugal relations of her contemporaries. Her heart was bound up in her husband's welfare and advancement, and she proved herself a vigilant and dexterous guardian of his interests. When he is absent she refrains as far as possible from worrying him about the details of family or pecuniary affairs, although she cannot always avoid alluding to the embarrassment in which she, like other ladies-in-waiting, not seldom found herself. The salaries of the court officials were paid with an irregularity and delay almost incredible, and the alternations between splendor and poverty in which distinguished personages of the imperial household passed their lives are vividly depicted in these letters. On one occasion the writer tells her husband that her means were so straightened that she would be obliged to sell her shawls and other belongings in order to pay for her court dresses. At that time (September, 1805), notwithstanding the ascendancy of Napoleon in Europe, there was a great scarcity of money in the city of Paris, and bank payments were interrupted. In the latter months of the same year, bank notes for a thousand francs were worth only ninety francs, and some shopkeepers would not take them at all. It is noteworthy how little enthusiasm could be aroused in the French capital by the victories which assured such unity of action and of feeling in the army. It would seem from these letters that the Parisians never thoroughly believed in Napoleon, and that he, conscious of the fact, spent as little time as possible among them, and frequently contemplated a permanent removal of the court to other quarters.

In one of her most interesting epistles Mme. de Rémusat gives her husband an account of the manner in which the court received the news of the battle of Austerlitz. They had been expecting the conclusion of peace and the return of the Emperor, but for eight days they had heard nothing. On the evening of Dec. 10, 1805, Princess Louis (Hortense Beauharnais) sent in haste for Mme. de Rémusat. The latter found the Princess quite agitated, weeping and laughing by turns. "He commanded in person," she exclaimed, "and completely defeated the two Emperors." "You can understand," says the writer, "that on hearing this I too began to tremble. * * * It was midnight when at last I returned home, worn out with emotion and fatigue, incapable of speaking another word, and of any other feeling but one of agitation and delight." Referring the next day to the same victory, she says: "The French are rather like women, exacting and impatient. It is true that the Emperor has spoiled us in this campaign, and certainly never was lover more eager to obey the wishes of his mistress than was his Majesty to fulfil ours. 'You wish for a rapid march?' 'Well, then, here is an army that was at Boulogne, and which in three weeks' time shall be in Germany.' 'You want a stronghold taken?' 'Ulm has capitulated.' 'You are not satisfied? You want more victories?' 'Here they are; here is Vienna that you wished for; and lastly, a pitched battle, in order that no kind of triumph may be wanting to you.' To all this," continues the writer, "we must add a number of noble and generous deeds, and words full of grandeur and goodness, so that our hearts are gladdened by this victory in addition to the national pride with which it fills us." It must be owned that Mme. de Rémusat here speaks in a very different strain from the cold and critical tone which pervades her memoirs.

Mme. de Rémusat was a loyal friend to the Empress Josephine, as is proved by the allusions in these letters to the latter's divorce. Writing in December, 1809, after the rupture of the marriage was finally determined on, she says: "The Empress weeps incessantly, and it is really painful to see her. * * * She is gentle, sad, and affectionate; in fact, it is heartrending. In the midst of her sufferings she never says a word too much, she never utters a bitter complaint; she is really like an angel. I induced her to take a walk this morning; I wanted to try to fatigue her body in order to rest her mind. She complied mechanically. I talked to her, questioned her, did all I could; she seconded my efforts, understanding my intentions, and seemed grateful to me in the midst of her tears. 'It seems to me sometimes,' said the Empress, 'that I am dead, and that there remains to me only a sort of vague consciousness that I am no longer living.'" Notwithstanding the disinterested attempt of the Queen of Holland to dissuade her, Mme. de Rémusat persisted in adhering to the broken fortunes of Josephine, and in renouncing the advantages which would be attached to the service of the Empress Marie Louise. She attended Josephine in her retirement in the south of France, and it appears that the ex-Empress, thanks to her happy temperament, after a time recovered the serenity of her mind. "We often," says Mme. de Rémusat, writing a year or two after the divorce, "speak of the Emperor; she likes to talk of him, and to persuade herself that he still cares for her, and she does this with the most admirable tact and moderation always."

In a letter from Aix, at this period, occurs a passage which emphatically attests the warmth and sincerity of Mme. de Rémusat's affection for her husband. "Yesterday," she writes, "the Empress asked me which of the two I loved best, you or our son Charles. 'My husband, madame,' I replied in the tone with which you are familiar. One of the ladies present looked up surprised. 'Really,' said the Empress, 'you answer in a resolute tone.' 'Madame, I answer as I feel.' 'M. de Rémusat is very amiable, then?' 'Amiable! oh, Madame!' and then," continues Mme. de Rémusat, "I did not know how to begin, and a moment after I did not know how to end. 'If all this be so,' returned the Empress, 'how happy you are.' I should have liked to say, 'But how much we suffer in being parted.' I did not say this. I restrained myself; but the tears came into my eyes, and I talked, I know not what nonsense, to escape from my thoughts."

After Louis Bonaparte had broken with his wife in July, 1810, the latter joined her mother in her south of France. "The Queen," says Mme. de Rémusat, "has arrived. She is thin, pale, downhearted, and always ready to cry, without exactly knowing why." Elsewhere the writer expresses the same favorable opinion of Josephine's daughter, which constitutes such a noteworthy feature of her memoirs, and which is so distinctly opposed to the current impression. "I cannot tell you," says our author, "how charming I think the Queen. Hers is really an angelic disposition, and she is quite a different creature from what she is generally supposed. Mr. Frizel, who had come here with an unfavorable impression of her, is quite fascinated. She is so true, so pure minded, so ignorant of evil, there is so sweet a melancholy about her and so great a resignation as to what the future may bring forth, that it is impossible not to feel very strongly for her."

There are but few letters in this collection which bear date during the years 1813 and 1814, and none of them contain allusions to important public events. One of them is worth quoting, however, for the attempt to explain the admirable liveliness so frequently observed in the epistolary compositions of women. "There is some truth," she says in a letter to her son, "in what you say of the facility with which women can write. I can hardly give a reason for it unless it arise from our habit of attaching greater importance than men do to the thousands of little daily occurrences which arouse emotion in us. We are thus led to talk of them with more vivacity and interest, yet without making too much of them; for it is a feminine gift to touch lightly on everything without pausing on any." She goes on to point out the piquant turn which a Parisian lady of society can give to the conversation in her salon; how skilfully she eludes an embarrassing dissertation, and how she contrives to include in one general conversation a number of men who all want to talk, but who would often have said nothing if they had not been drawn on, or if their interest or their vanity had not been awakened by some adroit word or other. This Mme. de Rémusat considers the grand art of women, and the reason that there is no real society except in countries where they hold a certain place.

A Singular Novel.

Whatever else may be said of *A Romance of the Nineteenth Century*, by W. H. MALLOCK, (Putnams), no one who takes it up will lay it down without finishing it. Notwithstanding what can be urged on more grounds than one in depreciation of the story, very few books of the year can vie with it in fascination. As might have been expected from the first venture of an essayist in the field of novel writing, there is too much talk and too little action. Not only, too, is the construction clumsy and the movement of the tale wanting in briskness and continuity, but some of the incidents and situations are unpleasant, not to say repulsive. The author makes scarcely an attempt at characterization in the case of the minor personages of his drama; they are all lay figures without individuality, although one of them, Lord Surbiton, has been supposed to be a portrait of the late Lord Lytton. There is, however, considerable distinctness in the figures of the hero and heroine, and their relations are depicted with a good deal of nervous force, though not always with the delicacy which is emphatically called for. So far as the central aim of the book is to enforce the profound difference between the sexual appetite and the sublimated passion of love, it seems to be well answered, although, with the object probably of projecting the contrast, the author has allowed himself a good deal of coarse suggestion. The style, however, is the same which proved so generally attractive in the papers published under the collective title, "Is Life Worth Living?" And here, as there, the reader is continually arrested and gratified by striking and original thoughts expressed in a felicitous and piquant way.

We do not propose to disclose the plot of the story, which, indeed, will hardly bear telling in concise, plain terms, but a few citations will demonstrate that the author's diction, at all events, is as graceful and agreeable in this book as it was in the former volume. Take, for instance, this excerpt from the sketch of the hero's character, wherein it is alleged, in some quarters, the author was portraying himself. There is a neat and characteristic turn in the final sentence: "It was supposed," we are told, "that Ralph Vernon had trifled with the affections of numerous women; it was supposed that he had wasted any amount of talent; it was supposed that from knowledge, or want of knowledge, he was without any kind of Christianity, and that, from want of earnestness, he was quite unmoved by its substitutes; he was supposed to have many friends warmly attached to him, and to be himself incapable of any warm attachment. This marked want in him," continues Mr. Mallock, "of anything really lovable, was made all the more prominent by a singular charm of manner which, for the time being, was certain to win every one. Such was the general impression of him, which, whether true or no, was, at all events, not groundless; and there was many a mother in London, of the best and purest type, who thought his character so cold, so unprincipled, and so repulsive, that he could atone for it only by becoming her daughter's husband." Elsewhere Mr. Mallock undertakes to develop the paradox that there is nothing in the world so intensely selfish as a woman's deep affection, and that the stronger and more single-hearted it is, the greater becomes its selfishness. "A man's passion," we are told, "is generous when compared with a woman's love. A man's passion, at its worst, lasts but a short time; even while it lasts its demands are limited; and what is more than this, a good man will restrain it. But the truer and more sensitive a woman is, the more thoroughly will she let her love master her; the less effort will she make to retain the least control of it." Mr. Mallock goes on at some length, and with much ingenuity, to defend his paradoxical thesis, whose converse, we need not say, will still be resolutely upheld by nine readers out of ten. "And what a master is a woman's love! Its jealousy is cruel as the grave, and its demands know no limit but the imagination of her that makes them. A woman who loves thus is not content with the chastest bodily constancy; she is not content even with the constancy of an undivided tenderness. These she takes for granted; they are not the things she craves for. What she craves for is the constancy of your whole thought and intellect. You are to have nothing in your mind that you do not confide to her; you are to stifle every interest with which she cannot be associated. If you want any mental help, it is she alone who must help you; and she had sooner you were helped ill by her than well by another person. She will be as jealous of your friendships as she is of your affections, and as jealous of your thoughts and tastes as she is of your friendships. She cannot patiently conceive of you as in relation to anything except herself. She desires to absorb your whole life into hers, and the larger part of it which she naturally cannot absorb she desires to see perish."

A Notable Volume of Poems.

To find an eminent member of the judiciary descending from the chancery bench and devoting himself with ardor to the production of melodious verse is to make a discovery not less gratifying than uncommon. In *The Welded Link and Other Poems* (Lippincott & Co.) we have evidence of the comprehensive taste and remarkable industry of Judge J. F. SIMMONS of Mississippi. His Muse can be dignified, yet does not lack the power to be sportive upon proper occasion. His verses are never the forced product of uncongenial labor; every line is evidently inspired by inclination and genuine fondness for the beautiful art which he has chosen to pursue. The extent of his resources is seen in the variety of his work. We have poems elegiac, patriotic, parodic, and devout; poems idyllic, epithalamic, and humorous. His range reaches from the lively cradle song to the solemn hymn and the metaphysical, almost Wordsworthian, stanzas that discuss the awful question of Hell.

We think that there is nothing in the book finer than the Elegy Written at the National Cemetery at Corinth. As the tribute of a Southerner, an ex-Confederate, to the Union dead who sleep there under the Union flag, it deserves notice, not less than for majestic beauty of versification. Judge Simmons intimates in his preface that he has been indirectly accused of plagiarism because he has employed the metrical arrangement of Gray's Elegy. Such a charge is ridiculous. No candid critic would entertain it for an instant. The solemn march of iambics in which Gray's thought proceeds is not only a proper form for the development of kindred themes, but it is also the common property of all poets who undertake them.

That a man of Judge Simmons's age should turn from the arduous labors and not unfrequently harsh duties of the bench to cultivate the graces of style and imagination is, we say, a gratifying sign of the tendency of the times. Other jurists might wisely follow his example.

CANONCHET.

A Visit to the Home of Ex-Gov. Sprague.

From the Philadelphia Press.

NARRAGANSETT HEIGHTS, Aug. 15.—Not the least interesting object of view from the piazzas of Tower Hill House is Canonchet, a mile north of Narragansett Pier, reached by a winding roadway. This orchard-embowered chateau, which bears the name of a noted king of the Narragansetts, is the home of ex-Gov. Sprague. The estate was originally the home of Gov. Atwood Robinson, and embraced from two to three thousand acres—it was a plantation, in fact, in Rhode Island's slave-holding days. An old graveyard belonging to the Robinson family lies not far distant from the house. Gov. Sprague bought the old Gubernatorial mansion, a gambrel-roofed farm-house, spacious for those colonial days, and two hundred acres of land, to which another two hundred, mostly salt marsh, were subsequently added at a cost of $25,000, and gave Mrs. Sprague carte blanche to remodel and rebuild, stipulating only that the original dwelling, with its low-studded walls, should remain for its historic associations. It is said here that he anticipated a cost of forty or fifty thousand dollars, but that the bills presented for it to the firm, of which Mr. Sprague was a member, were nearly or quite six hundred thousand dollars, and the building even then was not finished.

It is a light brown frame mansion, trimmed with a darker shade of brown, with many angles and turrets and verandas, the limit of the original house being outlined to a careful observer, but surmounted and surrounded by and almost bewilderingly lost in a labyrinth of stately architectural fancies. Our carriage alighted at the main or south entrance, where a carving of ivy leaves runs around the massive doorway under the porte cochère, and our coachman essayed to ring the bell. There was no response, and we drove to another elegant doorway at the eastern side. A man at a neighboring barn on the estate shouted, "No one is allowed to go inside the house;" but simultaneously a dishevelled woman servant put her head out of a rear window and said, "Come around this way." She received our card through the window, saying that Mr. Sprague was engaged with company up stairs, but she would hand it to him.

THE EX-GOVERNOR.

In a few minutes she reappeared and ushered us in by a door on the north side of the mansion, the barnyard side, leading into the servants' dining room, saying that Mr. Sprague would receive us in the library. Thither we followed her, and he soon came in. Mr. Sprague looks somewhat fleshier than of old; his black hair is still abundant, and his eyes, the finest feature of his face, seem to read your thought at once and to desire no subterfuges or disguises. He wore a comfortable dark cloth shooting jacket, with no vest, fine linen, well laundried, with low-turned collar, and holland trousers of light buff gray. He spoke freely of his old life in the Senate from 1862 to 1874, of war time, and the days of reconstruction, and incidentally of Mrs. Sprague from time to time, as evidences of her taste were displayed in the construction and ornamentation of the various rooms. We asked him of his son, and he said: "That's Willie now, firing off that gun outside. He is manifesting himself." He is 16 years old, a fine boy, and the father's eyes kindled with pleasure in speaking of him, and again in leading us through "the nursery part of the house," as he expressed it, where he said he made his quarters now. Here, in a beautiful chamber that was evidently a children's disused play room, broken toys were still strewn over the shelves of the cabinet, and a large doll in a pink dress, with broken leg and arm, dominated the situation.

The central idea of the house is its elaborate spiral oaken stairway, with carved balustrades reaching from the rotunda on the ground floor to the top of the main tower. This is estimated by some to have cost thirty thousand dollars, by some twenty thousand, but Mr. Sprague told me the cost could not be accurately computed, as it was done in a shop by day's work by expert Italian carvers. The two communicating parlors are beautifully ornate, but the heavy frescoing of one is falling from the ceiling and is propped up by a wooden framework. An elaborate mantelpiece from the Tuileries is a feature of this room. The specialty of the house is its suites of apartments suited to the entertaining of many guests, a parlor, bedroom, and bathroom in each suite. The largest of these is called the Chase room, being designed for the late Chief Justice, and daintily finished and furnished for him in gray and blue, though he occupied it scarcely more than once. An unframed portrait in oil of his little daughter by a first marriage, Mrs. Sprague's half-sister, whom she never knew, the child having died in her infancy, stands here in the fireplace. It is the face and figure of a little blonde beauty with her hand on the head of a pet dog. Mrs. Sprague's suite of apartments alone was closed to observation. The dining room was beautiful, with a pillared annex on either side communicating with the main room by large sliding doors. A shotgun lay nonchalantly on the mantelpiece of this room.

The house is semi-furnished; the library shelves are nearly denuded; some furniture appears to be boxed in the halls for removal, and some, our host explained, was now in the Providence home. An old Venetian armoire of massive beauty, and other articles to match, stand in one apartment. Whatever furniture there is is very handsome. The house is a Chinese puzzle in design. I asked its owner how many rooms there were. He said, half laughingly, he did not know, he had never counted them, but referred me to the ground and chamber plans, hanging respectively on each floor. There were about sixty rooms indicated, more or less, including the bath rooms, which are large and sumptuous. There is beautiful carving of walnut, oak, and other native woods all over the house, and the sink in the kitchen is of variegated red marble.

The most beautiful feature of all to me was the elaborately engraved plate-glass of windows and door panels, the figures in relief being of classic design and like fine sculpture; also, the little circular paintings, exquisitely wrought, in the centre of the windows at every turn of the grand staircase—here an ocean view, next an Indian scene, and so on, varying in design and beauty clear to the top of the tower. High up in another tower is a little apartment that comes upon you like a surprise, a dainty little banquet room, it might be, with walls of Pompeiian red. Another surprise is on the main floor, where you issue unexpectedly upon a luxurious marble-floored apartment of Moorish design—a smoking room perhaps—with a fountain in the centre. But the abomination of desolation was written everywhere. The door bells were unhung and voiceless; the pendulum was taken from the superb clock, [illegible] cased, that occupied a niche in one of the halls; the main and side doors of entrance were securely locked.

There are two large ornamental ponds, covering an area of about twenty acres, in front of the mansion, and there is a stretch of over 3,000 feet of fine beach, private to the estate, where the best surf bathing may be had. Much of the 400 acres of land is fit only for cranberry meadow. About 100 acres is arable or pasture land. Mr. Zechariah Chafee, as trustee for the creditors, has offered the premises for sale at auction the 25th of this month, but he has been restrained by a legal injunction. Messrs. Fryer and Butler, for their client, are understood to have made an offer to Mr. Chafee, as trustee, of $3,200,000 for the entire estate, which [illegible] ly to the estimates of [illegible] mated at $19,000,000. This, they [illegible] will pay the creditors forty per cent. of the indebtedness; but the offer thus far has not been favorably received.

The solitary figure of a man with a brown [illegible], showing our party with gentle courtesy through his once proud domain, [illegible] on our exit—not, as we entered, through a servant's door, but through one of the tall French windows of the library—calling [illegible] our carriage and reaching out a parting hand to the gray-haired lady of our party, [illegible] her, to bid a representative [illegible] linger in my memory not [illegible] character to be unsparingly judged; and I [illegible] sorry when, moved by [illegible] she said with gracious dignity, still holding his hand, "I hope you will not refuse an old woman's blessing." He smiled [illegible] and raised his hat to us with a [illegible] courtliness that belonged to the [illegible] and Governor of happier days. [illegible]

Beaver Hunting in the Northwest.

From the London Field.

The Indians of the United States—at least those of Wyoming, Colorado, Idaho, and Montana—are very indifferent trappers. The half breeds, on the contrary, are the deadly enemies of the beaver tribe, for they combine the keenness of the white man and the dogged perseverance and primitive style of living of their mothers' race. They will winter in regions where but very few even of the [illegible] hardy trappers will venture to remain, and, moreover, as they have generally a little party of squaws and young bucks with them, they reap all the advantages of skillful and gratuitous labor in skinning and preparing the pelt.

Not a few white trappers are married to squaws; but while their wives' kith and kin will not willingly accompany the pale-face, they would do so readily were the man a half-breed. Not a few trapper "outfits" I met or heard of were composed of both elements, say one white man and a half-breed, with a couple of young female slaves. These, as a rule, are perhaps the most successful, and I have heard of very large takes, making the business a really profitable one, were it not that the trappers, both whites and natives, are usually terribly cheated when exchanging their peltry for provisions.

The Government post traders and Indian agents at the remote little Indian forts, pushed far in advance of other white settlements, make a 250 per cent. profit in buying up beaver skins (they usually allow $1 or 4s. worth of provisions, which cost them perhaps a little more than half) and sending them direct to wholesale houses in New York, where they fetch from 10s. to 15s. In the old days of the fur traders the beaver skin was the unit of computation in buying or trading.

Fire arms, ammunition, and blankets were bought with beaver skins, and horses and squaw wives were traded for them. [illegible] wife was to be traded.